

16287497

88026482

QL
684

.C2

C372

1979

BLM LIBRARY



88026482

BREEDING BIRD SURVEYS
IN LANFAIR VALLEY, EASTERN MOJAVE DESERT,
SAN BERNADINO COUNTY, CALIFORNIA

January 1979

by

Steven W. Cardiff
2736 Court Street
Rialto, California 92376

for

Bureau of Land Management
1695 Spruce Street
Riverside, California 92507

Contract CA-060-CT8-59

QL
684
.C2
C372
1979

ELM Library
D-553A, Building 50
Denver Federal Center
P. O. Box 25047
Denver, CO 80225-0047

GRAZED CREOSOTE BUSH - YUCCA DESERT SCRUB I.-- Location: California; San Bernardino Co., Lanfair Valley on the Eastern Mohave Desert, 17.75 mi N of Goffs, NW 1/4 Sect.29 and NE 1/4 Sect.30, T13N, R18E, Lanfair Valley Quadrangle, USGS; 35°11'N, 115°04'W. The SW corner of the plot is about 90 m W and 300 m N of the water tank located in the NE 1/4 of Sect.30.

Continuity: New. Size: 20 ha=49.4 acres; rectangular, 400 x 500 m measured with steel tape, the length running N-S on a magnetic N compass grid.

Description of Plot: This habitat is typical of large areas of the Eastern Mohave Desert. Creosote, Goldenhead, and Big Galleta Grass are the major perennial species. Joshua Trees and Mohave Yuccas are widely scattered but are conspicuous and important as nesting sites. Four 100 pace toe-point transects were conducted to determine perennial plant cover and species composition. The substratum is composed of 51% dead plant litter, 27.25% bare ground, 18.5% small rocks (1/8"-3"), 3% shrub stems, and <1% large rocks (>3"). Perennial plant species composition was 37.5% Goldenhead (Acamptopappus spaerocephalus), 23.25% Creosote Bush (Larrea tridentata), 13.5% Big Galleta Grass (Hilaria rigida), 13.25% Anderson Thornbush (Lycium andersonii), 3.5% Little-leaved Ratany (Krameria parvifolia), 2.75% Winterfat (Eurotia lanata), 1.25% Nevada Joint Fir (Ephedra nevadensis), 1.25% Cheesebush (Hymenoclea salsola), 1% Woolly-fruited Burbush (Ambrosia eriocentra), and lesser amounts of Ricegrass (Oryzopsis hymenoides), Joshua Tree (Yucca brevifolia), Mohave Yucca (Yucca schidigera), Burrobrush (Ambrosia dumosa), Scale-broom (Lepidospartum squamatum), and Silver Cholla (Opuntia echinocarpa). The canopy cover of 15% was composed of 50% Creosote Bush, 28.5% Goldenhead, 15% Anderson Thornbush, 3.5% Cheesebush, 1.5% Little-leaved Ratany, and 1.5% Big Galleta Grass. The high percentage of litter was almost entirely due to a heavy cover of dead annuals brought about by large amounts of precipitation during the previous winter. The annual cover was primarily composed of Fiddleneck (Amsinkia tessellata) with Filaree (Erodium cicutarium), Peppergrass (Lepidium lasio-

carpum), and several species of Buckwheat (Eriogonum) also present in large amounts. The study site has a long history of livestock grazing which has affected percent cover and species composition and is situated near a livestock watering tank where grazing pressure and soil disturbance is particularly intense. This plot and Census # were set up in order to compare the effects of varying grazing intensities on bird populations. Edge: The plot is bounded by similar habitat to the E and W. Trampling by livestock near the water tank has created a large open area covered with weedy annuals immediately south of the plot. Another large open area lies a short distance to the north of the plot. A seldom-travelled dirt road runs NW-SE about 200 m from the SW corner. Topography: Flat and slightly sloping upwards from SE-NW. A shallow 10-20 m wide wash passes E-W through the plot near the N edge and a network of smaller washes showing 1-2 m of vertical relief also traverse the plot; elevation 3750-3770 ft. Water: Available at the water tank 300 m S of the plot. Weather: Clear and sunny during censuses, temperatures 60°-75°F, light W wind building up to moderate gusty W wind on last census day. Coverage: June 18-21; 0430-0730 PST. Total man-hours: 12. Census: Mourning Dove, 4 (20,8); Ladder-backed Woodpecker, 1; Ash-throated Flycatcher, 1; Verdin, 1; Cactus Wren, 1; Loggerhead Shrike, 1; Black-throated Sparrow, 1; Bendire's Thrasher, .5; Red-tailed Hawk, +; Prairie Falcon, +; N. Mockingbird, +. Total: 11 species; 10.5 territorial males (53/km², 21/100 acres). Remarks: 3 Mourning Dove nests with 2 chicks each were found on the plot. Large numbers of Mourning Doves would fly across the plot going to and from the water tank S of the plot. The Ash-throated Flycatchers, Verdins, Cactus Wrens, and Bendire's Thrashers were usually found near the large wash near the N edge of the plot and very few birds were found in the S 1/3 of the plot. Cactus Wrens, Loggerhead Shrikes, and Black-throated Sparrows were often seen in family groups with juveniles out of the nest. The Red-tailed Hawk and Prairie Falcon were seen foraging over the plot. The following species were seen on or over the plot but were not

considered to have nesting territories within the plot: Turkey Vulture, Say's Phoebe, Horned Lark, and Brewer's Sparrow. Cattle were seen on the plot on several occasions. This study was sponsored by the Bureau of Land Management, California Desert Plan Program.---Steven W. Cardiff, San Bernardino County Museum, 2024 Orange Tree Ln., Redlands, Calif. 92373 and Larry LaPre, Biology Dept., University of Calif., Riverside, Calif. 92507.

GRAZED CREOSOTE BUSH-YUCCA DESERT SCRUB II. -- Location: California; San Bernardino Co., Lanfair Valley, Eastern Mohave Desert, 19 mi N of Goffs, NW 1/4 Sec.19, T13N, R18E, Lanfair Valley Quadrangle, USGS; 35°12'N, 115°05'W. The SW corner of the plot is about 1.6 mi NW of the water tank located NE 1/4 Sec.30 and is about 200 m N of a dirt road running NW from the water tank. Continuity: New. Size: 20 ha = 49.4 acres; rectangular 400 x 500 m measured with steel tape, the length running N-S on a magnetic N compass grid. Description of Plot: See AB. Water: An underground water pipe paralleling the dirt road south of the plot developed a temporary leak and surface water was present during the census on Dec.21 and probably several days before and after. Weather: Clear or partly cloudy on all censuses, usually with light to moderate winds from the north. Temperatures during actual counts ranged between 40° and 65°F. Several storms during late December and early January produced significant precipitation in the area. Coverage: Dec. 11, 12, 21; Jan. 4, 11, 13. Total: 6 trips, between 0800 and 1115, averaging 2-3 hours each. Count: House Finch, 75 (375,152); White-crowned Sparrow, 50 (250,101); Mourning Dove, 35 (175,71); Sage Sparrow, 31 (155,63); Horned Lark, 9 (45,18); Black-throated Sparrow, 6 (30,12); Cactus Wren, .5 (3,1); Loggerhead Shrike, .5; Common Raven, +; Bewick's Wren, +; Rock Wren, +; LeConte's Thrasher, +; Brewer's Sparrow, +. Total: 13 species, 207 (1035/km², 418/100 acres). Remarks: Numbers include all birds seen on or over the plot. Horned Lark and Common Raven were seen flying over the plot. The wrens, sparrows, and finches were often seen in flocks of various sizes and species composition. The majority of birds, except Loggerhead shrike, were usually found in the vicinity of washes rather than the more open expanses of creosote bush. Golden Eagle, Red-tailed Hawk, American Kestrel, and Common Flicker were seen in similar habitat just outside the plot. The temporary presence of a water source just south of the plot was attractive to House Finches and

may have temporarily increased the numbers of this species on the plot.

No cattle were seen on the plot during the census period indicating a reduction in livestock numbers during the winter. This study was sponsored by the Bureau of Land Management, California Desert Plan Program.

-- STEVEN W. CARDIFF, San Bernardino Co. Museum, 2024 Orange Tree Ln., Redlands, CA 92373.

Lanfair Valley
PLOT 1 T13N, R18E, Sec 29 NW 1/4
(heavily grazed) Sec 30 NE 1/4

Lanfair Valley
PLOT 2 T13N, R18E, Sec. 19 NW 1/4
(lightly grazed)

<u>Date</u>	<u>#species</u>	<u>#indiv.</u>	<u>Date</u>	<u>#species</u>	<u>#indiv.</u>
12 July	10	91	11 July	11	86
26 July	8	108	25 July	11	93
16 August	8	33	15 August	8	51
30 August	9	20	28 August	7	40
10 September	9	49	9 September	10	117
24 September	12	428	24 September	12	405
8 October	11	100	8 October	13	107
26 October	8	41	26 October	9	109
12 November	10	62	12 November	7	198 (+108 Snow G.)
18 November	5	201	18 November	8	185

Avg.- 9 species, 113.3 individuals

Total 25 species

Range: 5-12 species, 20-428 indiv.

Avg.- 9.6 species, 139.1 individuals

Total 28 species

Range: 7-13 species, 40-405 indiv.

sparrow, 6 (30, 12); Cactus wren, 3 (25, 1); Loggerhead Shrike, 3; Common Raven, 1; Bewick's Wren, 1; Rock Wren, 1; Lutescent Flycatcher, 1; Brewer's Sparrow, 1. Total: 13 species, 207 (1133/ha², 200/200 acres). Remarks:

Numbers include all birds seen up or over the plot. Horned Lark and Common Raven were seen flying over the plot. The wren, sparrows, and finches were often seen in flocks of various sizes and species composition. The majority of birds, except Loggerhead shrike, were usually found in the vicinity of brush rather than the more open expanses of creosote bush. Golden Eagle, Red-tailed Hawk, American Osprey, and Common Flicker were seen in similar habitat just outside the plot. The temporary presence of a water source just south of the plot was attractive to House Finches and

19 species were found on both plots and the combined total from both plots was 34 species between 11 July and 18 November.

PRIMARY STATUS

Permanent Residents

Red-tailed Hawk
American Kestrel
Ladder-backed Woodpecker
Cactus Wren
LeConte's Thrasher
Loggerhead Shrike
House Finch
Black-throated Sparrow

Lingering Summer Residents

Mourning Dove
Ash-throated Flycatcher
Verdin
Mockingbird
Bendire's Thrasher
Scott's Oriole

Winter Residents

Rock Wren
Sage Sparrow
White-crowned Sparrow

Wandering Visitors

Common Raven
Pinyon Jay
Horned Lark
Black-tailed Gnatcatcher

Migrants

Snow Goose
Cooper's Hawk
Violet-green Swallow
Sage Thrasher
Ruby-crowned Kinglet
Yellow-rumped Warbler
Palm Warbler
Western Meadowlark
Chipping Sparrow
Brewer's Sparrow

Status Unknown

Burrowing Owl
Bewick's Wren
Vesper Sparrow

PLOT 1

<u>Species</u>	<u>#counts found</u>	<u>Avg.counts found</u>	<u>Avg. for all counts</u>
Red-tailed Hawk	3	1.3	.4
American Kestrel	7	1.14	.8
Mourning Dove	8	18.75	15.0
Ladder-bkd Woodpecker	5	1.2	.6
Verdin	3	1.3	.4
Cactus Wren	6	3.16	1.9
Rock Wren	1	1	.1
LeConte's Thrasher	3	1.66	.5
Loggerhead Shrike	9	1.77	1.6
House Finch	10	65.8	65.8
Sage Sparrow	4	8.5	3.4
Black-throated Sparrow	6	4.5	2.7
Brewer's Sparrow	3	4	1.2

PLOT 2

Red-tailed Hawk	3	1	.3
American Kestrel	3	1.3	.4
Mourning Dove	5	31.6	15.8
Ladder-backed Woodpecker	4	1.75	.7
Verdin	4	2.5	1
Cactus Wren	8	2.5	2
Rock Wren	3	1.66	.5
LeConte's Thrasher	5	1.8	.9
Loggerhead Shrike	10	2.3	2.3
House Finch	10	76.4	76.4
Sage Sparrow	5	21.6	10.8
Black-throated Sparrow	9	5.33	4.8
Brewer's Sparrow	4	16	6.4
White-crowned Sparrow	3	29.33	8.8

Below is a comparison of average densities for several bird species observed during the winter bird survey portion of this study. These particular species are considered to be the most representative for comparison between the two study plots. All of these species are permanent or winter residents and/or visitors which regularly occur in the creosote-yucca habitat of the area and which were found or expected to be found on both study plots.

<u>Species</u>	<u>Plot #1 (high grazing intens.)</u>	<u>Plot #2 (low intensity)</u>
Red-tailed Hawk	.67	-
American Kestrel	.17	-
Mourning Dove	15.60	35.16
Ladder-backed Woodpecker	.67	-
Bewick's Wren	-	.33
Cactus Wren	1.83	.67
Rock Wren	.33	.17
LeConte's Thrasher	.17	.17
Loggerhead Shrike	.83	.50
Sage Sparrow	17.00	30.66
Black-throated Sparrow	.83	5.50
Brewer's Sparrow	-	.33
White-crowned Sparrow	<u>3.33</u>	<u>50.30</u>
Average total individuals	41.43	123.79
Total number species	11	10

Spec

Red-
Amer
Mour
Ladd
Verd
Cact
Rock
LeCo
Logg
Hous
Sage
Blac
Brev

below is a comparison of average densities for several bird species
observed during the winter bird survey portion of this study. These data
particular species are considered to be the most representative for comparison with
data between the two study plots. All of these species are permanent or
winter residents and/or visitors which regularly occur in the creosote-
yucca habitat of the area and which were found to be expected on both study plots.
both study plots.

Species	Plot #1 (High grazing intensity)	Plot #2 (Low intensity)
Red-tailed Hawk	1.0	1.0
American Kestrel	1.0	1.0
Mountain Dove	1.0	1.0
Ladder-backed Woodpecker	1.0	1.0
Brewer's Wren	1.0	1.0
Cactus Wren	1.0	1.0
Rock Wren	1.0	1.0
Leconte's Thrasher	1.0	1.0
Loggerhead Shrike	1.0	1.0
Sage Sparrow	1.0	1.0
Black-throated Sparrow	1.0	1.0
Brewer's Sparrow	1.0	1.0
White-crowned Sparrow	1.0	1.0
Average total individuals	11	10
Total number species	11	10

BLM Library
D-553A, Building 50
Denver Federal Center
P. O. Box 25047
Denver, CO 80225-0047

Form 1279-3
(June 1984)

BORROWER'S CARD

OL 684 .C2 C372 1979

Breeding bird surveys in the
Lantfair Valley, eastern

DATE LOANED	BORROWER	OFFICE	DATE RETURNED

USDI - BLM

(Continued on reverse)

BLM Library
D-553A, Building 50
Denver Federal Center
P. O. Box 25047
Denver, CO 80225-0047

